

EXHIBIT L

Expert Report of Andrew Wolfe (Corrected)

September 13, 2021

Qualifications

1. I am an economic advisor to the Financial Oversight and Management Board for Puerto Rico (the “FOMB” or the “Board”), a Consultant for the Inter-American Development Bank and United States Agency for International Development, and, while presently am on leave, an Adjunct Professorial Lecturer at the Baker Institute for Public Policy at Rice University in Houston, Texas.
2. I have been employed as an advisor to the FOMB on a contract basis since November 17, 2016. As part of that engagement, I have been asked by the FOMB to provide my opinions regarding the macroeconomic issues surrounding the growth and inflation expectations for the Commonwealth of Puerto Rico and to evaluate the macroeconomic framework underlying the fiscal plans proposed by the Governors of Puerto Rico and certified (in some cases with revisions) by the FOMB.
3. In addition to serving as the FOMB’s economic advisor, a fiscal consultant and an educator, I worked at the International Monetary Fund (the “IMF”) for 27 years. When I left the IMF in 2014, I was the Head of the IMF Human Resource Strategy Unit, and, immediately before that, I was the Senior Personnel and Budget Manager of the Western Hemisphere Department. During my years at the IMF, I was IMF Mission Chief to El Salvador, Colombia, the Dominican Republic, Uruguay and Peru and IMF Resident Representative in Uruguay, Argentina and Peru. My responsibilities in those positions included leading negotiations on IMF-supported programs, monitoring fiscal deficits in those countries as well as examining whether IMF financial and economic projections were met. While at the IMF, I set policy reform agendas for lending programs in coordination with senior advisors at the IMF and senior financial officials for the governments in question. I also oversaw the IMF teams that monitored performance of those countries pursuant to such lending programs and whether those countries adhered to agreed-upon structural reforms and fiscal and monetary programs.
4. Prior to my retention as an economic advisor to the FOMB, I was retained from late 2014 through mid-2016 by the Government Development Bank for Puerto Rico (GDB). In this period, I, along with my former IMF colleagues Anne O. Krueger and Ranjit Teja, analyzed the macroeconomic condition of the Commonwealth. Dr. Krueger is a distinguished economist and the former First Deputy Managing Director of the IMF, and Dr. Teja was a high-ranking senior staff member at the IMF. We co-authored and published the results of our study in a report entitled “Puerto Rico - A Way Forward,” which is commonly referred to as the “Krueger Report.”¹
5. I received my Ph.D. in Economics from the University of Wisconsin in 1985, and my B.S.E. in Economics and B.A.S. in Engineering from the University of Pennsylvania in 1978. A full

¹ See Krueger, A.O., Teja R. and Wolfe, A. (2015).

curriculum vitae can be found in Appendix 1, and a list of my testimony in other cases can be found in Appendix 2.

6. My contract for the FOMB technically expired on June 30, 2021, but as has been the case with previous contract renewals, I expect a renewal to take place in the coming weeks. As in the past in such circumstances, I have been guided by the terms of the prior year contract. Under that contract I work up to half-time on matters related to Puerto Rico at a fixed monthly hourly rate of \$300 and a monthly maximum fee of \$25,000. Part of this work includes working with the FOMB's legal teams in providing them with economic analysis that they might require, including providing expert testimony. In this circumstance, therefore, I am receiving no additional compensation for the preparation of this Report or for any additional requirements that might follow from the Report's preparation.

Overview and Summary of Opinions

7. I was asked to opine on the issue of whether there are actions that can be taken by the Government of Puerto Rico which, if implemented, would produce sufficient resources to allow for the full repayment of the Commonwealth's restructured post-confirmation debt service (principal and interest) as provided for in the Seventh Amended Title III Joint Plan of Adjustment ("Plan of Adjustment" or "Plan").
8. The analysis herein is based on my experience with, and knowledge of, Puerto Rico's economic conditions and challenges, my understanding of the certified 2021 Commonwealth Fiscal Plan ("Fiscal Plan"), projected debt service under the Plan, and my review and consideration of the documents and data listed in Appendix 3, as well as my training and experience in economics.
9. I reserve the right to supplement or modify my Report in light of new information or subsequent reports issued by other experts in this case.
10. Of the economic factors identified in the Fiscal Plan that impact the financial projections for Puerto Rico, the factor most in the control of the Commonwealth Government is its ability to carry out policies that can sustainably raise economic growth on the Island from its negative underlying trend.² In this Report, I analyze the financial impact of certain structural reforms of the Puerto Rico economy recommended in the Fiscal Plan (but not taken into account as part of the projections and surplus in the Fiscal Plan), as well as additional reforms recommended in this Report that together would substantially boost growth. That, in turn, would create a sustainable level of financial resources and improve the cash flows to enable the Commonwealth to meet all of its projected debt service responsibilities through the end of the period addressed in the Plan.

² In both the Krueger Report (2015) and the Fiscal Plan, the trend rate of real GNP growth is negative (around -1%).

11. Structural reforms are policies that lay the foundation for private sector investments, which in turn raise productivity and growth. The FOMB, since the first fiscal plan in 2017, has urged the Puerto Rican Government to carry out such reforms. These reforms would address problems in the following areas among others:

- labor markets (where the Puerto Rican labor participation rate of 41.6% is well below the lowest U.S. state of West Virginia, which is at 55.2%);³
- the ease of doing business (EODB, or product market reforms), where according to the latest World Bank rankings, the United States as a whole ranks 6th out of 191 countries, while Puerto Rico ranks 65th; ⁴ and
- taxation (the Puerto Rico tax base is narrow and has many subsidy and incentive programs that are carried out through the tax system (i.e., tax expenditures)).⁵

12. To date, the Commonwealth Government has largely failed to implement the structural reforms recommended by the Board. Even after accounting for the significant reduction of Commonwealth debts through the Title III process, projected revenues and obligations of the Commonwealth in the Fiscal Plan and Plan of Adjustment show surpluses on an annual basis in amounts sufficient to cover new debt service obligations only through FY2034. Thereafter, starting in FY2035, if the Commonwealth returns to its longer-term trend forecast of negative real economic growth, those surpluses will begin to shrink and fall below the debt service obligation (and eventually turn to deficits starting in FY2036).⁶ In the absence of additional corrective measures or reforms, the Commonwealth is projected not to have sufficient funds to meet its debt service obligations as of FY2035. That outcome is avoidable and within the control of the Puerto Rico Government.

13. Proactively implementing structural reforms in the areas identified in paragraph 11 above would, in my opinion, turn the negative growth trend around and create a stream of fiscal surpluses that would be sufficient to cover the Commonwealth's debt service obligations under the Plan. These kinds of reforms have been implemented in other comparable jurisdictions with positive effects. Implementing structural reforms consistent with the pace of implementation in the Fiscal Plan in the areas of labor markets, EODB, and taxation would generate a sustainable fiscal and debt situation for the Commonwealth.

³ Data is as of July 2021; for Puerto Rico the source is: the Puerto Rico Development Bank, <https://www.bde.pr.gov/BDESite/PRED.html>, and for West Virginia the source is the BLS, <https://www.bls.gov/web/laus/lalfprderderr.xlsx>.

⁴ World Bank (2020), "Doing Business, Comparing Business Regulation in 190 Economies," World Bank Group, Washington, D.C., p.4.

⁵ See discussion in Section 17.3 of Fiscal Plan on implementing and enforcing revenue measures.

⁶ Fiscal Plan, pp. 59 and 63-64 and Exhibits 25 and 28 and the Excel fiscal plan model: "April 2021 Fiscal Plan Model.xlsx."

Analysis

14. As referenced above, since its inception, the FOMB has encouraged the Puerto Rico Government to undertake structural reforms to address weaknesses in its economy. To date, only limited progress has been made, chiefly in the area of reforming the energy sector, starting with the concession for transmission and distribution awarded to the firm, LUMA. The FOMB has recommended significant other reforms in the areas of labor markets, EODB, and taxation, among others, in part because such reforms have been implemented in other jurisdictions and shown to generate significant impacts on growth in various studies in the economic literature.⁷ According to the IMF study by Anderson, et. al. (2014), for the periphery countries to the EU core:⁸

- In the area of labor reforms, the IMF recommended to: (i) ease regulations in the area of employment protection that raise the cost of hiring labor and which effectively go beyond the protections to address layoffs and firings that are patently unjust or based on discriminatory practices; (ii) promote active retraining programs for those looking to return to the labor market; (iii) establish policies to assist families to manage the demands in the labor force of two-parent workers (e.g., public support for childcare); and (iv) reform unemployment insurance and pension programs to ensure that they do not discourage labor force entry and encourage labor force exit.
- In the area of EODB reforms, the IMF recommended to address the issue of excessive markups and profit margins and restrictions on competition by revamping legal and administrative barriers to entry and entrepreneurship and trade.
- In the area of tax reform, the IMF recommendation was to reform the tax code in a revenue-neutral way by: (i) shifting the tax emphasis away from income and toward consumption; and (ii) broadening the tax base by eliminating the least efficient tax expenditures (basically exemptions and incentives) that would provide space to lower tax rates.

15. The structural reforms recommended by the Board in the Fiscal Plan in these three areas have been tailored to match Puerto Rico's circumstances. Appendix 4 provides a summary of which reforms are: (1) Category 1: recommended by the Board in the Fiscal Plan *and* evaluated (i.e. scored) as to their impact on financial growth and included in the Plan projections; (2) Category 2: recommended by the Board as additional structural measures that should be adopted by the Puerto Rico Government, but which have not been scored in the Fiscal Plan; and, (3) Category 3: reforms that, while not discussed in the Fiscal Plan, in my opinion should be adopted by the Government to further stimulate growth of the Puerto Rico economy.

⁷ See Anderson, et.al. (2014), Haidar, J.I. (2012), and Micallef, B. (2015).

⁸ The IMF focus is on Europe and, in particular, the countries on the periphery of the European core; the latter group having a similar economic synergy to the Core of Europe as Puerto Rico has with the mainland. Examples of periphery countries are: Ireland, Greece, Portugal, Italy and Spain.

16. Specifically, in the area of labor reform, measures are needed that would increase the demand for labor while providing incentives for workers to rejoin the formal labor market. The key labor reforms recommended by the Board are:

- repealing Law 80-1976, which makes it costly for firms to hire labor because of the inflexibility of laying off workers (Category 2);⁹
- implementing high-quality worker training programs (Category 2); and
- introducing an earned-income tax credit (EITC) to incentivize workers to join the formal labor market (Category 1; this plan will be receiving a boost from recent federal legislation).

Of these recommendations, only the third, relating to EITC, is scored in the Fiscal Plan (Category 1). To date, while the Commonwealth Government has authorized and has begun to implement an EITC program, progress in improving labor participation has been limited because of the slow pace of implementation of the program. In this circumstance, the Fiscal Plan estimates that the program will start to produce a long-term impact on growth of 15 basis points (bps) in FY2025.¹⁰

17. In my opinion, additional (Category 3) steps that can be taken to improve labor market performance, in addition to those mentioned above would include:

- implementing job search assistance in addition to worker training programs;
- establishing a uniform workday and enabling employers to provide flexible work week schedules; and
- imparting flexibility in regulations that are especially hard on small- and medium-sized enterprises, including: (i) easing December bonus payment waiver processes; (ii) making discretionary the December bonus payment to firms of 25 employees or fewer; (iii) modifying mandatory vacation days for all new hires based on fractional time in the employee's first year of employment; and (iv) extending the employment probation period to one year (from the current 6 months).

18. In the area of EODB reforms, the Board recommended reforms in the area of easing investment and doing business that effectively focused on reforms to improve government processes by facilitating investing in property development and new businesses on the Island (Category 1), modernizing government operations through technology and access points, such as filing business permits and taxes (Category 1), and also called for

⁹ Fiscal Plan, p.63. Repealing Law 80 would, for example, allow for: limiting mandatory severance pay at six months and allow excluding non-cash benefits from severance calculations. It would also allow businesses to retain employees based on performance in the event of a downsizing or reorganization of operations.

¹⁰ According to a study by Marr, C., et al (2015), the EITC and the child tax credit promote work, reduce poverty, and support children's development. Their research finds that EITC expansions between 1984 and 1996 accounted for more than half of the large increase (15% points) in employment among single mothers during that period. Other studies finding positive effects on labor participation include: Eissa and Leibman (1996), Miller, et. al. (2008), Grogger (2001), and Hotz, Mullin and Scholz (2005).

deregulating the internal transportation sector, which currently is fraught with nontransparent rate setting and barriers to entry (Category 2).¹¹ However, only the first two areas of reform were scored in the Fiscal Plan (with a cumulative 30 bps permanent increase in growth starting in FY2026). Certain progress has been made in implementing steps to make it easier to pay taxes and acquire operating permits and in modernizing access to government services and regulations through digitalization.

19. While I agree with the Board's EODB proposals, in my view even more robust (Category 3) reforms also are possible, which could achieve an even greater impact. Specifically, this would occur in the areas of increasing competition and promoting investment and strengthening legal and corporate governance practices. This would include:

- amending Law 75-1964, which protects existing firms in an industry by setting restrictions on the cancelation of inter-firm supplier contracts—this is a particular problem in sectors where new firm entries, like food distribution, are commonplace; and
- improving corporate governance regulations and strengthening the judiciary.¹²

20. In the area of tax reform, the Board has laid out guidelines to lower statutory marginal tax rates and broaden the tax base by eliminating exemptions, deductions, credits, and incentives, but has not included the impact of tax reform on growth in its revenue projections in the Fiscal Plan (Category 2).¹³ I agree with the thrust of the Board's tax reform recommendation and, based on the tax reform literature,¹⁴ in my opinion the following additional reasonable tax reforms (Category 3) can and should be adopted by the Puerto Rico Government:

- On corporate taxation: (i) enact legislation to amend Puerto Rico's Internal Revenue Code and municipal taxation regime to implement a unified tax regime for both new and existing companies; (ii) reduce the corporate tax rate; (iii) eliminate inefficient corporate deductions; (iv) do away with municipal tax on inventories; (v) simplify/flatten the tax code and eliminate incentives to multinational companies that take the form of tax

¹¹ Fiscal Plan, p. 63 and Chapter 11.

¹² In addition to the EODB reforms recommended by the Board and addressed in this Report, there are still others where substantial improvement in the investment climate could be achieved. For instance, Puerto Rico scores significantly worse than the rest of the U.S. in both contract enforcement and the protection of minority shareholder rights. According to the World Bank's 2020 Ease of Doing Business report, out of 191 jurisdictions, Puerto Rico placed 70th in contract enforcement and 88th in protecting the rights of minority shareholders, compared with mainland rankings of 17th and 36th, respectively.
(<https://www.doingbusiness.org/content/dam/doingBusiness/country/u/united-states/USA.pdf>.
<https://www.doingbusiness.org/content/dam/doingBusiness/country/p/puerto-rico/PRI.pdf>.)

¹³ Fiscal Plan, p. 63.

¹⁴ For example, see (among others in Appendix 5), Engen and Skinner (1992), Feldstein (1986), Gale and Samwick (2014), Lucas (1990) and McBride (2012).

breaks and tax credits; and (v) create a single tax code applicable to both local and multi-national entities.

- On the taxation of small- and medium-sized enterprises (SMEs): (i) recalibrate the tax regime to reduce the overall tax burden on SMEs; (ii) target tax proposals to remove constraints to investment by Puerto Rican-owned businesses; and (iii) establish tax credits to encourage investments that bring SMEs close to the technology frontier and improve productivity.
- On structural tax policy: strip the authority of any instrumentality (outside of the Treasury) or public corporation to grant tax exemptions.
- On property tax: update the land registry to align property valuations and rates with present conditions.
- On credits and subsidies: (i) institute a uniform cost-benefit analysis process for all business tax credits and subsidies; and (ii) eliminate credits with poor returns and tie credits to quantifiable targets.

21. Relating structural reforms to their impact on economic growth in the economic literature is carried out through econometric regression analysis and/or simulation techniques. Both guide us in projecting the potential impact of the aforementioned structural reforms on the economic growth outlook for Puerto Rico. In the area of labor reform, a study on Malta, a small island economy closely linked to an economic giant (the EU), provides an estimate of the impact that a sound and comprehensive labor reform program, like the one described above in paragraphs 16 and 17, can have on economic growth. Specifically, the Malta program is estimated to have contributed to an 80 bps per annum increase in potential output between 2008 and 2014.¹⁵

22. To evaluate the impact of EODB reform, a study of the link between business regulatory reforms and economic growth in 172 countries over a 5-year period on the business regulatory and competitiveness environment was summarized in the World Bank's Doing Business reports. The results show a clear link between business regulatory reforms and economic growth--specifically, that, on average, targeted improvements in the business environment from regulatory reforms that spur competition and facilitate the ease of doing business are associated with a 15 bps increase in the growth rate of GDP for each category of doing business.¹⁶ A reform to deregulate the internal distribution system (Category 2), which is identified as a potential additional policy in the Fiscal Plan (p.63), in combination with improving competition on the Island in general (mainly through the elimination of

¹⁵ For details of the Malta program, see Micallef, B. (2015).

¹⁶ For details, see Haidar, J.I. (2012). The ease of doing business categories for which the reform effort apply cover the following 12 areas of investing in and maintaining a business: (i) starting a business; (ii) dealing with construction permits; (iii) getting electricity; (iv) registering property; (v) getting credit; (vi) protecting minority investors; (vii) paying taxes; (viii) trading across borders; (ix) enforcing contracts; (x) resolving insolvency; (xi) employing workers; and (xii) contracting with the government.

Law 75, Category 3) and reforms to strengthen the enforcement of contracts and corporate governance (Category 3), can each add an additional permanent 15 bps increase in growth.

23. The IMF study, Anderson, et. al. (2014), includes simulations that show that countries in the European periphery that implement a comprehensive tax reform along the lines described in the Fiscal Plan and above can push real GDP above its baseline by 40 bps in year 1, 60 bps in year 2, and 100 bps over the longer term (10-15 years) following the tax reform.¹⁷ Some tax literature also supports the view that the types of tax reforms proposed by the Board produce a permanent impact on growth. But even more conservative assumptions demonstrate a comprehensive tax reform as described in the Fiscal Plan and above could be expected to produce a significant bump up in the rate of growth for around a 10-year period.¹⁸

24. For reference, the Fiscal Plan projections show that the surplus of revenue over noninterest expenditures will fall short of the new debt service obligations (as outlined in the Plan of Adjustment) starting in 2035 (summarized in Appendix 6, Table 1 of this Report). As noted in the Fiscal Plan (p.63):

“The 2021 Fiscal Plan shows short-term surpluses driven by significant federal relief as well as fiscal measures and structural reforms. Long-term deficits are driven by healthcare costs that outpace GNP growth (even after reforms, in part due to the Medicaid “fiscal cliff”), lack of robust structural reforms, phase out of disaster relief funding, and declining Act 154 revenues...While the 2021 Fiscal Plan projects deficits from FY2036 onward, the Government will be required to take additional measures that go beyond the FY2022-26 framework of this 2021 Fiscal Plan as the Puerto Rico Constitution requires the Government to operate within a framework of fiscal balance.”

25. To analyze the financial impact of the additional (Category 2 and 3) structural reform efforts in the areas of labor market reform, EODB reforms, and tax reforms identified in this Report, I start with the underlying Fiscal Plan excel model and revise the timing and impact of the more ambitious Category 2 and 3 labor and EODB reforms described in paragraphs 16-19 above. For tax reform, I model the impact based on the findings of the growth impact of such reforms in Anderson, et. al. (2014), such that the model assumes real GDP will be higher than it would be in the absence of tax reform starting in FY2024, and this bump up would grow in size through FY2029, at which time real GNP would be 100 bps higher than it would be in the absence of tax reform; however, in this tax reform analysis, I do not conclude there is a permanent impact on growth.

26. Using this modeling structure of introducing the aforementioned reforms in the next few years, which would have additional impact on growth, my analysis, summarized in Appendix 6, Table 2 of this Report, shows that in the next few years, the Category 2 reforms

¹⁷ Anderson et. al. (2014), pp.11-16.

¹⁸ Anderson et. al. (2014), pp.11-12.

proposed but not scored in the Fiscal Plan (identified in paragraphs 16, 18 and 20 above) and additional Category 3 reforms that I identify (in paragraphs 17, 19 and 20 above) would generate sustainable real economic growth that would enable the Commonwealth, while conforming to the fiscal policies in the Fiscal Plan, to cover its debt service obligations with ample margins in every year covered by the Fiscal Plan and Plan of Adjustment, including for the period beginning in 2035. Specifically, my analysis assumes (as to Categories 2 and 3):

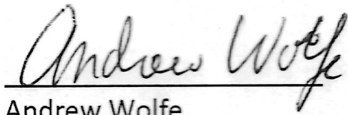
- Labor reforms are introduced in FY2025 and FY2026 such that real growth picks up 40 bps in FY2025 (which includes the EITC impact already scored in the fiscal plan) and another 40 bps in FY2026 and thereafter remains 80 bps higher than the current trend.¹⁹
- The additional reforms to bolster the EODB on the Island in the areas of corporate governance, contract enforcement mechanisms, and improving competition on the Island, including through internal transportation deregulation, are modeled to provide for a 30 bps permanent pickup in growth. As well, my analysis maintains the two areas of EODB reforms already in the Fiscal Plan (digitalization and permitting and improvements), which also account for a 30 bps permanent pickup in growth. The impacts are combined such that real growth picks up 30 bps by FY2026 (as in the Fiscal Plan) and another 30 bps by FY2029, and thereafter remains 60 bps higher than the current trend.
- On tax reform, based on the findings of the growth impact of such reforms in Anderson, et. al. (2014), the model assumes that real GDP will be 40 bps higher than it would be in the absence of tax reform in FY2024, 60 bps higher than it would be in the absence of tax reform in FY2025, and incrementally another 10 bps higher over FY2026-FY2029, at which time real GNP would be 100 bps higher than it would be in the absence of tax reform without assuming a permanent impact on growth.

27. As shown in Appendix 6, if the three areas of Category 2 and 3 reforms described above are adopted by the Commonwealth, then for every year addressed in the Plan there would be ample surpluses to cover debt service. Cumulatively, the Commonwealth will build surpluses that total \$32.4 billion over the period FY2022-FY2046, well above the cumulative debt service over that same period of \$10.9 billion as provided for in the Plan. Such buffers provide protection in the event that some of the reforms are implemented with a delay or not at all. Each individual structural reform proposal has an important impact, but as can be seen in Appendix 7, Table 3, the impact of any one reform is less than the cumulative surplus after debt service.

28. The projections in Appendix 6, Table 2 are conservative, as they do not rely on various potentially beneficial developments that might occur, including potential benefits to the Commonwealth of pending court cases on social security and political discussions in Washington on Medicaid formulas for the U.S. territories.

¹⁹ A 2-year bump up in growth is consistent with how labor reforms were modeled in the April 2018 fiscal plan.

29. For all of the reasons stated above, in my opinion there are appropriate reforms the Government of Puerto Rico can and should adopt which, if implemented, would produce sufficient resources to allow for the full repayment of the Commonwealth's restructured post-confirmation debt service (principal and interest) as provided for in the Plan of Adjustment.

A handwritten signature in cursive script that reads "Andrew Wolfe". The signature is written in dark ink and is positioned above a horizontal line.

Andrew Wolfe

September 17, 2021

Appendix 1—Curriculum Vitae

NATIONAL OF: United States

CURRENT POSITIONS:

Economic Advisor to the Puerto Rico Financial Oversight and Management Board
Consultant for the United States Agency for International Development (USAID)
Fiscal Consultant for the Inter-American Development Bank
Adjunct Professorial Lecturer, American and Rice Universities (on leave)

EDUCATION:

1978	B.S.E., Economics, University of Pennsylvania
1978	B.A.S., Engineering, University of Pennsylvania
1985	Ph.D., Economics, University of Wisconsin

LANGUAGES:

English-Native
Spanish-Fluent

CONSULTING EXPERIENCE

2016-present	Macro-modeling and Fiscal consultancy on the Puerto Rican economy (FOMB)
2021-present	Programmatic Analysis of Civil Service Reform Approaches (USAID)
2020-2021	Analysis of the Fiscal Impact of Proposed Public Sector Reforms in Costa Rica (IADB)
2018	Fiscal Savings from Civil Service Reform in Cost Rica (IADB)
2017	Sovereign debt analysis for the Government of Guatemala (IADB)
2016	Debt Sustainability Analysis for the Government of Nicaragua (IADB)
2016	Presentation of IMF programming process for the Government of Honduras (IADB)

UNIVERSITY EXPERIENCE:

2017 –present	Rice University, Adjunct Faculty in the James Baker School of Public Policy
2013- present	American University, Adjunct Faculty in the School of International Studies
1983- 1986	Bowdoin College, Assistant Professor

IMF CAREER:

1987-1992	Economist, Western Hemisphere Department (WHD)
1992-1995	Resident Representative, Uruguay (1992-95) and Argentina (1994-95)
1995-1997	Senior Economist, Fiscal Affairs Department
1997-2000	Resident Representative, Peru
2001-2002	IMF Mission Chief, Peru
2002-2005	IMF Mission Chief, Uruguay
2005-2006	Senior Resident Representative, Argentina
2006-2009	IMF Mission Chief, Dominican Republic
2009-2011	IMF Mission Chief, El Salvador and Colombia
2011-2014	Senior Personnel and Budget Manager, WHD, Head of IMF Human Resource Strategy

Unit

PUBLICATIONS:

"Fiscal Accounting of Bank Restructuring". With James Daniel and Jeffrey Davis. IMF Paper on Policy Analysis and Assessment (PPAA/97/5), 1997.

"Las Orígenes, las Políticas, la Recuperación, y las Lecciones Aprendidas". Uruguay: Qué Aprendimos de la Crisis Financiera de 2002?. World Bank (May 29, 2007).

"A Primer on Currency Unification and Exchange Rate Policy in Cuba: Lessons from Exchange Rate Unification in Transition Economies". Co-author with Gabriel DiBella (IMF), Presented at the 2009 American Economics Association Meetings.

"Recession and Policy Transmission to International Tourism: Does Expanded Travel to Cuba offset Crisis Spillovers? Co-author with Rafael Romeu (IMF), ASCE 2010.

"Cuba: An approximation of the Output Gap". Co-author with Gabriel DiBella and Rafael Romeu (IMF), Presented at the 2011 American Economics Association Meetings.

"Puerto Rico—A Way Forward". With Anne O. Krueger and Ranjit Teja. Report written for the Government Development Bank of Puerto Rico, June 2015.

Appendix 2 –Previous Expert Testimony

1. UNITED STATES DISTRICT COURT FOR THE DISTRICT OF PUERTO RICO

PEAJE INVESTMENTS LLC,	Adv. Proc. No. 17-151-LTS in 17 BK 3567-LTS
Plaintiff,	
-v-	
PUERTO RICO HIGHWAYS AND TRANSPORTATION AUTHORITY, <i>et al.</i>	Adv. Proc. No. 17-152-LTS in 17 BK 3283-LTS
Defendants.	

2. UNITED STATES DISTRICT COURT FOR THE DISTRICT OF PUERTO RICO

UNIÓN DE TRABAJADORES DE LA INDUSTRIA ELÉCTRICA Y RIEGO, INC. (UTIER),	Adv. Proc. No. 17-229-LTS in 17 BK 4780-LTS
Plaintiff,	
-v-	
PUERTO ELECTRIC POWER AUTHORITY, <i>et al.</i>	Adv. Proc. No. 17-229-LTS in 17 BK 3283-LTS
Defendants.	

Appendix 3 – Document Review List

Abraham, K.G. and Kearney, M.S. (2018) “Explaining the Decline in the U.S. Employment-to-Population Ratio: A Review of the Evidence,” NBER Working Paper 24333, February 2018.

Anderson, D., et. al. (2014) “Assessing the Gains from Structural Reforms for Jobs and Growth,” Chapter 7 of *Jobs and Growth: Supporting the European Recovery*, IMF April 2014.
<https://www.imf.org/en/News/Seminars/Conferences/2016/12/30/Jobs-and-Growth-Supporting-the-European-Recovery>.

Castillo-Freeman, A., and Freeman, R. B., (1992), “When the minimum wage really bites: The effect of the US-level minimum on Puerto Rico,” in Borjas, G.J. and Freeman, R.B. (Eds.), “Immigration and the Workforce: Economic Consequences for the United States and source areas,” Chicago: University of Chicago Press, pp. 177–211.

Cofina Municipal Secondary Market Disclosure Information Cover Sheet.
<https://emma.msrb.org/ES1242011-ES970143-ES1371514.pdf>.

Chisari, O., Estache, A. and Romero, C. (1998) “Winners and Losers from the Privatization and Regulation of Utilities: Lessons from a General Equilibrium Model of Argentina,” *The World Bank Economic Review*, Vol. 13, No. 2: 357-78.

Divanbeigi, R. and Ramalho, R. (2015) “Business Regulations and Growth,” Policy Research Working Paper 7299, World Bank 2015.

Eissa N. and Leibman, J. (1996) “Labor Supply Response to the EITC,” *Oxford Journal of Economics*, May 1996.

Escalera-Rodriguez, R. (2016) “PUERTO RICO: Two interesting articles about distributorship contracts”, <https://www.idiproject.com/news/puerto-rico-two-interesting-articles-about-distributorship-contracts>. International Distribution Institute. October 13, 2016.

FOMB (2021). The 2021 Fiscal Plan for Puerto Rico, Restoring Growth and Prosperity, Certified by the Financial Oversight and Management Board for Puerto Rico, April 23, 2021.

FOMB (2020). The 2020 Fiscal Plan for Puerto Rico, Restoring Growth and Prosperity, Certified by the Financial Oversight and Management Board for Puerto Rico, May 27, 2020.

FOMB (2019). The 2019 Fiscal Plan for Puerto Rico, Restoring Growth and Prosperity, Certified by the Financial Oversight and Management Board for Puerto Rico, May 9, 2019.

FOMB (2018). The 2018 Fiscal Plan for Puerto Rico, Restoring Growth and Prosperity, Certified by the Financial Oversight and Management Board for Puerto Rico, October 23, 2018.

FOMB (2018). The 2018 Fiscal Plan for Puerto Rico, Restoring Growth and Prosperity, Certified by the Financial Oversight and Management Board for Puerto Rico, June 29, 2018.

FOMB (2018). The 2018 Fiscal Plan for Puerto Rico, Restoring Growth and Prosperity, Certified by the Financial Oversight and Management Board for Puerto Rico, April 19, 2018.

FOMB (2017). Fiscal Plan for Puerto Rico, March 13, 2017.

Grogger, J. (2001) "The Effects of Time Limits and Other Policy Changes on Welfare Use, Work, and Income among Female-Headed Families," NBER Working Paper 8153, March 2001.

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Appendix 4

Area for reform	Category 1: Reforms in the 2021 fiscal plan projections	Category 2: Reforms mentioned in the fiscal Plan but not included in the plan projections	Category 3: Additional reforms beyond those in the Fiscal Plan	Incremental impact of reforms in Categories 2 & 3
Labor markets	Implement a fully-functioning EITC that would give a permanent boost to growth of 15 bps a year starting in FY 2025.	The Fiscal Plan, in Chapter 7 on human capital and welfare reform, mentions several other areas of reform that are not scored in the fiscal projections. These include: introducing a NAP work requirement, building workforce development programs, and reducing employment barriers. The plan proposes (p.63) to carry out a: “Private sector labor reform, generating an additional 50 bps GNP growth over two years, by repealing Law 80 of May 30, 1976 , which would make Puerto Rico an employment at-will jurisdiction, similar to its principal competitor mainland states, such as Florida.”	Reforms to improve labor market efficiency include: (i) implement job search assistance in addition to worker training programs; (ii) establish a uniform workday and allow employers to provide flexible work week schedules; and (iii) impart flexibility in regulations that are especially hard on SMEs, including: ease December bonus payment waiver processes; make discretionary the December bonus payment to firms of 25 employees or fewer; modify mandatory vacation days for all new hires based on fractional time in the employee’s first year of employment; and extend the employment	The adoption of these labor reforms results in an improvement in the cumulative surplus over FY2022- FY2046 of \$18.9 billion. ²⁰

²⁰ The amount of cumulative surplus increase from the labor reforms is \$30.5 billion for the period FY2022- FY2051.

			probation period to one year (from the current 6 months).	
Area for reform	Category 1: Reforms in the 2021 fiscal plan projections	Category 2: Reforms mentioned in the fiscal Plan but not included in the plan projections	Category 3: Additional reforms beyond those in the Fiscal Plan	Incremental impact of reforms in Categories 2 & 3
Ease of Doing Business	The fiscal plan projections include: implementation of reforms to improve efficiencies in: property permitting, property registration, and occupational licensing, and simplifying paying taxes. These measures are projected to be fully implemented by FY 2026, at which time there will have been a cumulative, permanent impact on growth of 30 bps a year.	The plan proposes as a measure in the future (p.63) an: “Ease of doing business reform, generating an additional 15 bps in real GNP growth, based on instituting trading across borders reform, and repealing restrictive and inefficient regulations, and implementing a comprehensive reform of the Transportation system. ”	Repeal Law 75, which protects existing firms in an industry by setting restrictions on the cancelation of inter-firm supplier contracts (and combine with deregulation of the transportation system). Improve corporate governance regulations and strengthen the judiciary. Each additional reform would add an additional 15 bps in real GNP growth.	The adoption of these EODB reforms results in an improvement in the cumulative surplus over FY2022-FY2046 of \$7.2 billion. ²¹

²¹ The amount of cumulative surplus increase from the EODB reforms is \$12.3 billion for the period FY2022-FY2051.

Area for reform	Category 1: Reforms in the 2021 fiscal plan projections	Category 2: Reforms mentioned in the fiscal Plan but not included in the plan projections	Category 3: Additional reforms beyond those in the Fiscal Plan	Incremental impact of reforms in Categories 2 & 3
Tax reform	No specific actions are included in the plan projections.	The plan proposes as a measure in the future (p.63) to: “Overhaul of the tax system of Puerto Rico to stimulate growth by lowering the statutory marginal tax rates and broadening the tax base by eliminating many exemptions, deductions, credits, and incentives.”	The reform guideline in Category 2 should concentrate on the corporate sector by: unifying the tax regime for both new and existing companies; reducing rates; eliminating inefficient deductions; doing away with municipal tax on inventories; simplifying the tax code and eliminating incentives to multinational firms that take the form of tax breaks and tax credits; and creating a single tax code for local and multinational firms. Also, on the taxation of SMEs, the reform would: reduce the overall tax burden; remove constraints to investment by Puerto Rican-owned businesses; and establish tax credits	The adoption of these tax reforms results in a bump up in growth for a 10-year period that provides an additional \$2.4 billion over FY2022-FY2046. ²²

²² The amount of cumulative surplus increase from the tax reforms is \$3.2 billion for the period FY2022-FY2051.

			<p>to encourage investments in technology and productivity.</p> <p>Other areas of reform include: (i) strip the authority of PRIDCO to grant tax exemptions; (ii) update the land registry to raise property valuations and reset rates to yield needed revenues; and (iii) institute a uniform cost-benefit analysis process for all business tax credits and subsidies, eliminating those with poor returns and tie credits to quantifiable targets.</p>	
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Appendix 6 – Model Tables and Results

Table 1. April 2021 Fiscal Plan with Current Debt Service Schedule

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Outturn in the 2021 Fiscal Plan															
Annual impact of structural reform															
Private sector labor/Welfare reform	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PPPs/Energy reform	0.00	0.00	0.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Doing Business reform	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other reform	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Education (post-FY2023)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.10	0.10	0.35	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumulative impact of structural reform															
Private sector labor/Welfare reform	0	0	0	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
PPPs/Energy reform	0	0	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Doing Business reform	0	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other reform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Education (post-FY2023)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0.1	0.2	0.55	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Real GNP growth (annual rate)	1.5%	(1.5%)	(0.7%)	0.4%	0.7%	1.5%	0.9%	0.1%	(0.3%)	(0.2%)	(0.8%)	(0.8%)	(0.9%)	(0.9%)	(1.5%)
Factor	1.01502	0.98463	0.99282	1.00439	1.00673	1.01496	1.00880	1.00091	0.99745	0.99784	0.99167	0.99201	0.99109	0.99077	0.98462
Nominal GNP growth (annual rate)	2.8%	(0.2%)	0.7%	1.9%	2.2%	3.1%	2.4%	1.6%	1.3%	1.3%	0.7%	0.7%	0.8%	0.6%	0.0%
Factor	1.02837	0.99759	1.00715	1.01937	1.02201	1.03057	1.02444	1.01643	1.01318	1.01316	1.00680	1.00695	1.00618	1.00599	1.00001
Primary surplus (millions of \$s)	1,716	1,320	1,071	1,265	1,334	1,478	1,407	1,346	1,217	1,009	802	609	401	207	(119)
Primary surplus less total debt service 2/	926	549	319	640	730	886	849	661	557	375	195	30	0	(163)	(457)
memo item:															
Nominal GNP	73,333	73,156	73,679	75,106	76,759	79,106	81,040	82,371	83,457	84,555	85,130	85,722	86,252	86,768	86,769
real GNP	6,076	5,983	5,940	5,966	6,006	6,096	6,150	6,155	6,140	6,126	6,075	6,027	5,973	5,918	5,827
Debt service 2/	790	771	752	625	604	582	559	685	660	634	607	579	400	370	338

Source: April 2021 fiscal plan excel model.

1/Cumulative column covers FY2022-46 and is the geometric cumulative growth rate and sum totals of the primary surplus, debt service, and the primary surplus less debt service.

2/This is the primary surplus in the April 2021 Fiscal Plan Model, less the debt service in the Seventh Amended Title III Joint Plan of Adjustment of the Commonwealth of Puerto Rico, Et. Al., No. 17 BK 3283-LTS, July 30, 2021.

Table 1. April 2021 Fiscal Plan with Current Debt Service Schedule (concluded)

	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	Cumulative 1/
Outturn in the 2021 Fiscal Plan																
Annual impact of structural reform	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Private sector labor/welfare reform	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PPPs/Energy reform	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Doing Business reform	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Other reform	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Education (post-FY2023)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Total	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Cumulative impact of structural reform																
Private sector labor/welfare reform	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	
PPPs/Energy reform	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Doing Business reform	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Other reform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Education (post-FY2023)	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13	0.14	0.15	
Total	0.76	0.77	0.78	0.79	0.8	0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.9	
Real GNP growth (annual rate)	(1.1%)	(0.9%)	(0.8%)	(0.6%)	(0.5%)	(0.5%)	(0.5%)	(0.5%)	(0.5%)	(0.4%)	(0.4%)	(0.4%)	(0.4%)	(0.3%)	(0.3%)	-8.77%
Factor	0.98875	0.99080	0.99237	0.99362	0.99460	0.99468	0.99477	0.99504	0.99526	0.99553	0.99590	0.99618	0.99642	0.99695	0.99719	
Nominal GNP growth (annual rate)	0.5%	0.9%	1.1%	1.2%	1.3%	1.3%	1.4%	1.4%	1.4%	1.4%	1.5%	1.5%	1.5%	1.6%	1.6%	
Factor	1.00503	1.00925	1.01124	1.01235	1.01335	1.01333	1.01370	1.01379	1.01416	1.01433	1.01489	1.01499	1.01532	1.01586	1.01611	
Primary surplus (millions of \$)	(324)	(481)	(629)	(775)	(1,149)	(1,234)	(1,331)	(1,437)	(1,544)	(1,627)	(1,737)	(1,865)	(1,992)	(2,105)	(2,237)	4,533
Primary surplus less total debt service 2/	(628)	(751)	(862)	(970)	(1,308)	(1,393)	(1,490)	(1,596)	(1,703)	(1,787)	(1,737)	(1,865)	(1,992)	(2,105)	(2,237)	(6,382)
memo item:																
Nominal GNP	87,205	88,011	89,000	90,100	91,303	92,520	93,788	95,081	96,427	97,809	99,266	100,754	102,297	103,920	105,594	
real GNP	5,761	5,708	5,665	5,629	5,598	5,568	5,539	5,511	5,485	5,461	5,439	5,418	5,399	5,382	5,367	
Debt service 2/	304	270	233	195	159	159	159	159	159	159	-	-	-	-	-	10,915

Source: April 2021 fiscal plan excel model.

1/ Cumulative column covers FY2022-46 and is the geometric cumulative growth rate and sum totals of the primary surplus, debt service, and the primary surplus less debt service.

2/ This is the primary surplus in the April 2021 Fiscal Plan Model, less the debt service in the Seventh Amended Title III Joint Plan of Adjustment of the Commonwealth of Puerto Rico, Et. Al., No. 17 BK 3283-LTS, July 30, 2021.

Table 2. 2021 Fiscal Plan Augmented with Labor Market and Ease of Doing Business (EODB) and
Tax Reforms

Projection: April 2021 Fiscal Plan Augmented with Labor Market, Ease of Doing Business (Product Market), and Tax	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Annual impact of structural reform	0	0	0	0.4	0.4	0	0	0	0	0	0	0	0	0	0
Private sector labor/Welfare reform	0	0	0.1	0.1	0.1	0	0	0	0	0	0	0	0	0	0
PPPs/Energy reform	0	0.1	0	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0
Doing Business reform	0	0	0.4	0.2	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0
Tax reform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Education (post-FY2023)	0	0.1	0.1	0.6	0.6	0.1	0.1	0.1	0	0	0	0	0	0	0
Total	0	0.1	0.1	0.6	0.6	0.1	0.1	0.1	0	0	0	0	0	0	0
Cumulative impact of structural reform	0	0	0	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Private sector labor/Welfare reform	0	0	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
PPPs/Energy reform	0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Doing Business reform	0	0	0.4	0.2	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0
Tax reform (annual impact only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Education (post-FY2023)	0	0.1	0.6	1	1.5	1.6	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Total	0	0.1	0.6	1	1.5	1.6	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Real GNP growth (annual rate)	1.50%	-1.54%	-0.33%	0.87%	1.39%	2.29%	1.78%	1.09%	0.65%	0.69%	0.10%	0.14%	0.06%	0.03%	-0.54%
Nominal GNP growth (annual rate)	2.64%	-0.24%	1.11%	2.38%	2.93%	3.87%	3.36%	2.66%	2.24%	2.24%	1.63%	1.65%	1.58%	1.57%	1.01%
Primary surplus (millions of \$s)	1,716	1,320	1,106	1,341	1,480	1,708	1,736	1,787	1,764	1,666	1,571	1,494	1,403	1,331	1,127
Primary surplus less total debt service	926	548	354	715	876	1,126	1,177	1,102	1,104	1,031	964	914	1,003	961	789
memo item:															
nominal GNP	73,333	73,156	73,967	75,726	77,944	80,960	83,677	85,903	87,826	89,792	91,253	92,759	94,228	95,706	96,678
real GNP	6,076	5,983	5,963	6,015	6,099	6,239	6,349	6,419	6,461	6,505	6,512	6,521	6,525	6,527	6,492
Debt service	790	771	752	625	604	582	559	685	660	634	607	579	400	370	338

Sources: Test 3_Coverage of Gap_April 2021 Fiscal Plan Model, Test 3 Sub calc_Coverage of Gap_April 2021 Fiscal Plan Model, April 2021 Fiscal Plan Model, and the Seventh Amended Title III Joint Plan of Adjustment of July 2021.
1/ Cumulative column is for 2022-46, and is the geometric cumulative growth rate and sum totals of the primary surplus, debt service, and the primary surplus less debt service.

Table 2. 2021 Fiscal Plan Augmented with Labor Market and Ease of Doing Business (EODB) and
Tax Reforms (concluded)

Projection: April 2021 Fiscal Plan Augmented with Labor Market, Ease of Doing Business (Product Market), and Tax	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	Cumulative 1/
Annual impact of structural reform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Private sector labor/Welfare reform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PPPs/Energy reform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Doing Business reform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tax reform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Education (post-FY2023)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Total	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Cumulative impact of structural reform	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
Private sector labor/Welfare reform	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
PPPs/Energy reform	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
Doing Business reform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tax reform (annual impact only)	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13	0.14	0.15	
Education (post-FY2023)	1.71	1.72	1.73	1.74	1.75	1.76	1.77	1.78	1.79	1.8	1.81	1.82	1.83	1.84	1.85	
Total	-0.14%	0.05%	0.20%	0.31%	0.40%	0.40%	0.42%	0.45%	0.47%	0.51%	0.53%	0.56%	0.58%	0.63%	0.66%	11.81%
Real GNP growth (annual rate)	1.50%	1.91%	2.10%	2.20%	2.29%	2.29%	2.33%	2.34%	2.38%	2.39%	2.45%	2.46%	2.49%	2.54%	2.57%	67.78%
Primary surplus (millions of \$)	1,050	1,028	1,020	1,018	793	882	925	984	1,049	1,142	1,217	1,281	1,352	1,446	1,529	32,418
Primary surplus less total debt service	746	758	786	823	634	703	766	825	889	983	1,217	1,281	1,352	1,446	1,529	21,504

memo item:
nominal GNP 98,130 100,008 102,109 104,358 106,752 109,200 111,744 114,358 117,076 119,879 122,817 125,838 128,975 132,255 135,653
real GNP 6,483 6,486 6,499 6,519 6,545 6,571 6,599 6,628 6,659 6,693 6,729 6,767 6,806 6,849 6,894
Debt service 304 270 233 195 159 159 159 159 159 159 159 159 159 159 159 159 10,915

Sources: Test 3, Coverage of Gap, April 2021 Fiscal Plan Model, April 2021 Fiscal Plan Model, April 2021 Fiscal Plan Model, and the Seventh Amended Title III Joint Plan of Adjustment of July 2021.
1/Cumulative column is for 2022-46, and is the geometric cumulative growth rate and sum totals of the primary surplus, debt service, and the primary surplus less debt service.

Appendix 7—Individual Impact of Structural Reforms

Table 3. Impact of additional structural reforms on the cumulative surplus (FY2022-FY2046)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Primary surplus (all reforms)	1,716	1,320	1,106	1,341	1,490	1,708	1,736	1,787	1,764	1,666	1,571	1,494	1,403	1,331	1,127
Primary surplus (all reforms except tax reform)	1,716	1,320	1,071	1,288	1,418	1,634	1,650	1,689	1,664	1,563	1,466	1,387	1,294	1,219	1,014
Primary surplus (all reforms except additional labor reform)	1,716	1,320	1,106	1,318	1,397	1,561	1,522	1,504	1,408	1,235	1,063	906	734	577	288
Primary surplus (all reforms except additional EODB reform)	1,716	1,320	1,106	1,341	1,490	1,699	1,706	1,726	1,670	1,538	1,409	1,295	1,167	1,066	813
Primary surplus (2021 fiscal plan)	1,716	1,320	1,071	1,265	1,334	1,478	1,407	1,346	1,217	1,009	802	609	401	207	(119)
Impact of labor reform	-	-	-	23	84	147	214	283	356	431	508	588	670	754	839
Impact of EODB reforms	-	-	-	-	-	10	30	61	94	127	162	198	236	275	314
Impact of tax reform	(0)	(0)	35	53	63	74	85	98	100	102	104	107	109	111	113

1/ Cumulative column is the sum totals over FY2022-FY2046

Sources: Test 3_Coverage of Gap_April 2021 Fiscal Plan Model, Test 3 Sub calc_Coverage of Gap_April 2021 Fiscal Plan Model, and April 2021 Fiscal Plan Model.

Table 3. Impact of additional structural reforms on the cumulative surplus (FY2022-FY2046),
concluded

	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	Cumulative 1/
Primary surplus (all reforms)	1,060	1,028	1,020	1,016	793	862	925	984	1,049	1,142	1,217	1,281	1,352	1,446	1,529	32,418
Primary surplus (all reforms except tax reform)	934	909	898	894	666	732	792	848	909	1,000	1,071	1,131	1,199	1,289	1,367	29,976
Primary surplus (all reforms except additional labor reform)	122	6	(100)	(206)	(532)	(572)	(622)	(680)	(737)	(769)	(825)	(888)	(969)	(1,022)	(1,094)	13,567
Primary surplus (all reforms except additional EODB reform)	695	629	576	527	253	271	281	285	292	326	339	338	342	365	373	25,177
Primary surplus (2021 fiscal plan)	(324)	(481)	(629)	(775)	(1,149)	(1,234)	(1,331)	(1,437)	(1,544)	(1,627)	(1,737)	(1,865)	(1,992)	(2,105)	(2,237)	4,533
Impact of labor reform	928	1,022	1,120	1,221	1,326	1,434	1,547	1,664	1,785	1,911	2,043	2,179	2,321	2,469	2,622	18,862
Impact of EODB reforms	355	399	444	491	540	591	644	699	756	816	878	943	1,011	1,081	1,155	7,241
Impact of tax reform	116	119	121	124	127	130	133	136	139	143	146	150	154	158	162	2,442

1/ Cumulative column is the sum totals over FY2022-FY2046

Sources: Test3_Coverage of Gap_April 2021 Fiscal Plan Model, Test3 Subcalc_Coverage of Gap_April 2021 Fiscal Plan Model, and April 2021 Fiscal Plan Model.